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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,238	08/13/2001	Stephen F. Gass	SDT 315	8811
27630	7590	05/30/2008	EXAMINER	
SD3, LLC			ALIE, GHASSEM	
9564 S.W. Tualatin Road			ART UNIT	PAPER NUMBER
Tualatin, OR 97062			3724	
			MAIL DATE	
			05/30/2008	DELIVERY MODE
				PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN F. GASS,
DAVID S. D'ASCENZO and
DAVID A. FANNING

Appeal 2007-3155
Application 09/929,238
Technology Center 3700

Decided: May 30, 2008

Before WILLIAM F. PATE III, TERRY J. OWENS, and
JENNIFER D. BAHR, *Administrative Patent Judges*.

WILLIAM F. PATE III, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

This is an appeal from the final rejection of claims 9 and 30. These are the only claims remaining in the application.

We have jurisdiction over the appeal pursuant to 35 U.S.C. §§ 6 and 134.

The claimed invention is directed to a miter saw having a detection system able to detect contact between a moving blade and the user and a brake mechanism able to stop the blade when contact between a user and the blade are detected.

Claim 9, reproduced below, is further illustrative of the claimed subject matter.

9. A miter saw comprising:

a support structure having a cutting zone;

a swing arm above and pivotally attached to the support structure;

a rotatable blade supported by the swing arm so that the blade may move into the cutting zone;

a handle associated with the swing arm and adapted so that a user may pivot the swing arm and blade into the cutting zone;

a motor adapted to drive the blade;

a detection system adapted to detect contact between the blade and a person; and

a brake mechanism adapted to stop rotation of the blade upon detection by the detection system of contact between the blade and the person.

REFERENCES

The references of record relied upon by the examiner as evidence of obviousness are:

Lokey	3,785,230	Jan. 15, 1974
Yoneda	4,117,752	Oct. 03, 1978
Brundage	4,934,233	Jun. 19, 1990
Suzuki	5,791,224	Aug. 11, 1998

REJECTION

Claims 9 and 30 stand rejected under 35 U.S.C. § 103 as unpatentable over Brundage or Suzuki in combination with Lokey and Yoneda.

FINDINGS OF FACT

Suzuki and Brundage both show the common elements of a miter or cut-off saw. Turning to Brundage, Brundage discloses a saw with a base or frame 3 having a turntable 7 and a saw blade slot 9 therein. See col. 4, ll. 10-16. Brundage discloses a saw blade 17 rotated by motor 21 with the electric motor and the blade guard and housing 19 pivotally mounted relative to the supporting frame or base 3 at pivot 25. See col. 4, ll. 30-36.

Suzuki also discloses a miter saw. The saw comprises a support frame having a base table 1 with a swing arm or main support link 10 mounted thereon. A handle 13b is provided for the user to lower the blade 15 into the work to be cut. See col. 6, ll. 22-27. The blade 15 is turned by an arbor 14 connected to a motor not shown. *Id.*

Neither Suzuki nor Brundage discloses a detection system or a brake system adapted to stop the blade upon contact by the user with the blade.

Lokey discloses an automatic safety brake for rotary blade equipment. Two embodiments are illustrated: 1) with a circular saw and 2) with a table saw. Figure 1 illustrates the brake 10 attached to an electrical circular saw

11 wherein blade 13 rotates on arbor 14. The blade is electrically insulated from the arbor 14 by washers W. See col. 1, ll. 58-62. An amplifier 15 is connected to an antenna 16 positioned close to the blade so that the blade 13 becomes a part of the electronic circuit. When a user comes close to the blade 13, the bell 20 will ring. If the user approaches closer to the blade, power will be sent to solenoid 21 which urges brakes 24 to contact the rotating blade and stop it, virtually instantaneously. See col. 3, ll. 16-31. Lokey thus discloses both a detecting means and a means for stopping the blade when user proximity is detected.

Yoneda discloses a band saw. The band saw has a frame 21, 23, 24 and insulated idler pulleys 12 and 13. The blade is rotated by pulley 11 connected to motor 10. Electromagnetic clamp brake 20 is provided along with an electrically conducting bearing 16 which constantly senses the capacitance of the rotating blade 14. When a user contacts the blade 14, the change in capacitance is detected and motor 10 is halted and automatic clamp brake 20 is actuated and immediately stops the blade. See col. 2, ll. 14-41. Accordingly, Yoneda discloses both a detecting system and a system for stopping the blade when contact between a user and the blade is detected.

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734

(2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”) The Court in *Graham* further noted that evidence of secondary considerations “might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” *Graham v. John Deere Co.*, 383 U.S. at 18.

While there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007).

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id., at 1740. We must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Id.

ANALYSIS

We will sustain the rejection of claims 9 and 30. In our view, the use of a detecting means and a brake actuated by the detecting means as disclosed in Yoneda and Lokey when used on the miter saws of Brundage and Suzuki is merely combining prior art elements according to known methods to yield predictable results. *See KSR* 127 S.Ct. at 1739. The fact that detecting means and brake means are found on band saws, circular saws and table saws indicates to us that these are known techniques which may be used to improve similar devices, such as miter saws, in the same way. Appellants have two arguments with respect to the § 103 rejection. First Appellants argue that there is no motivation to combine the references. As noted above, we think there is ample motivation for one of ordinary skill to use these known methods in the miter saws of Brundage and Suzuki. We further note that in *KSR*, the Supreme Court held that a rigid application of such a mandatory formula as teaching, suggestion, or motivation was incompatible with its precedent concerning obviousness. *See KSR* 127 S.Ct. at 1741.

Appellants further argue that there is no reasonable expectation that the combination of references would succeed. Appellants first argue with respect to Lokey that Appellants do not know of a solenoid that is powerful enough to stop the blade in time to prevent injury. We note that Lokey describes the stoppage of the blade as virtually instantaneous.

“Enablement requires that ‘the prior art reference must teach one of ordinary skill in the art to make or carry out the claimed invention without undue experimentation.’” *Elan Pharm., Inc. v. Mayo Found.*, 346 F.3d 1051, 1054, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003) (remanding the case to the district court for a determination of whether the prior art reference enabled persons of ordinary skill to make the invention without undue experimentation)(citing *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1301 (Fed. Cir. 2002) and *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1369 (Fed. Cir. 1999)) (“Whether undue experimentation would have been required to make and use an invention, and thus whether a disclosure is enabling under 35 U.S.C. § 112, ¶ 1, is a question of law that we review de novo, based on underlying factual inquiries....)). Mere attorney argument is insufficient to provide a factual basis for the conclusion that a reference is non-enabling. Arguments of counsel cannot take the place of objective evidence. *In re Payne*, 606 F.2d 303, 315 (CCPA 1979); *In re Lindner*, 457 F.2d 506, 508 (CCPA 1972).

Additionally, we credit the objective statements in Lokey over the broad, conclusory arguments in Appellants’ Brief. In giving more weight to a prior publication than to a subsequent conclusory argument by counsel we are acting well within our discretion as triers of fact. See *Velander v. Garner*, 348 F.3d 1359, 1371 (Fed. Cir. 2003). Therefore, we fully credit Lokey that his device can be stopped virtually instantaneously.

Appellants argue that Yoneda would not be successful because the bearing as shown in rollers 16 in Yoneda would not work in a miter saw, because a miter saw has a circular blade that spins instead of a band blade

along which the bearing can roll. Appellant states that the bearing would skip over the side of the circular blade because different points on the blade would have different angular velocities depending on how far the point is from the axis of rotation. We disagree with this seemingly far-fetched argument of Appellants. We are of the view that a contact roller that touches the flat side of a rotating blade at a constant radial distance from the arbor is well within the skill of a worker in the rotary saw art.

Appellants further argue that if a detection and braking system such as shown by Lokey and Yoneda were combined into the miter saws of Brundage and Suzuki, the resulting saw would be unsafe. Appellants' argument is that a miter saw, which by definition is mounted on a pivoted arm, would be thrown forcefully downwardly in the event that the angular momentum of the blade was interrupted by a braking means. However, as we have seen in the prior art, Lokey discloses both a hand-held circular saw and a table saw with a spinning circular saw blade. With respect to the circular saw embodiment of Lokey, stopping the saw instantaneously with the conservation of angular momentum creates a kick-back force that one of ordinary skill would recognize and deal with. Thus, it is not seen how the angular momentum of the suddenly stopped saw blade provides an unworkable potentially dangerous device in contradistinction to Appellants' argument.

Finally, we acknowledge Appellants' declaration by inventor Stephen F. Gass. The declaration in paragraph 5 establishes that power saws are inherently dangerous and cause many accidents. However, the raw statistics quoted in paragraph 5 do not provide any meaningful evidence that the

safety devices found in Lokey and Yoneda have failed. Appellants' argument with regard to the so-called failure is simply conjecture and does not rise to the level of evidence. With respect to paragraph 6 of the declaration, we acknowledge that Appellants' technology has received numerous awards. Putting aside the issue of the public relations aspect of these awards, we note that the declaration fails to establish any nexus between the awards and the claimed subject matter. The declaration fails to establish that these awards were even for a power miter saw as claimed in the instant application. Such generalized evidence fails to establish a nexus between the claimed subject matter and the seemingly laudatory awards received. Such evidence can in no way rebut the *prima facie* case of obviousness established by the examiner.

CONCLUSION AND ORDER

The obviousness rejection of claims 9 and 30 is affirmed.

Appeal 2007-3155
Application 09/929,238

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2007).

AFFIRMED

vsh

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